

Investigation of the steric structure of certain compounds of the bicyclo-[4,2,0]octan-7-one series

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Abstract

1. The steric structure of adducts of dichloroketene and cyclohexene, dichloroketene and methyl-cyclohexene, dimethylketene and dihydropyran was investigated by the methods of dipole moments and molar Kerr constants. 2. For all the adducts, the preferential conformation of the bicyclo[4,2,0]octan-7-one system is the anti-boat conformation. 3. The adduct of dimethylketene and dihydropyran has the structure of 8,8-dimethyl-2-oxobicyclo-[4,2,0] octan-7-one. The formation of such a structure is apparently determined by the electron donor influence of the oxygen atom in dihydropyran on the process of cycloaddition. © 1974 Consultants Bureau.

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